

535,161

10/535161

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
3 June 2004 (03.06.2004)

PCT

(10) International Publication Number
WO 2004/047215 A1

(51) International Patent Classification⁷: **H01M 10/48**,
10/42, G01R 31/36

(21) International Application Number:
PCT/IB2003/004929

(22) International Filing Date:
5 November 2003 (05.11.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
102 53 184.6 15 November 2002 (15.11.2002) DE

(71) Applicant (for DE only): **PHILIPS INTELLECTUAL
PROPERTY & STANDARDS GMBH** [DE/DE]; Stein-
damm 94, 20099 Hamburg (DE).

(71) Applicant (for AE, AG, AL, AM, AT, AU, AZ, BA, BB, BE,
BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CY, CZ, DK,
DM, DZ, EC, EE, EG, ES, FI, FR, GB, GD, GE, GH, GM,
GR, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX,

MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD,
SE, SG, SK, SL, SY, SZ, TJ, TM, TN, TR, TT, TZ, UA, UG,
UZ, VC, VN, YU, ZA, ZM, ZW only): **KONINKLIJKE
PHILIPS ELECTRONICS N.V.** [NL/NL]; Groenewoud-
seweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **RIEMSCHEIDER,
Karl-Ragmar** [DE/DE]; c/o Philips Intellectual Property
& Standards GmbH, Weisshausstr. 2, 52066 Aachen (DE).

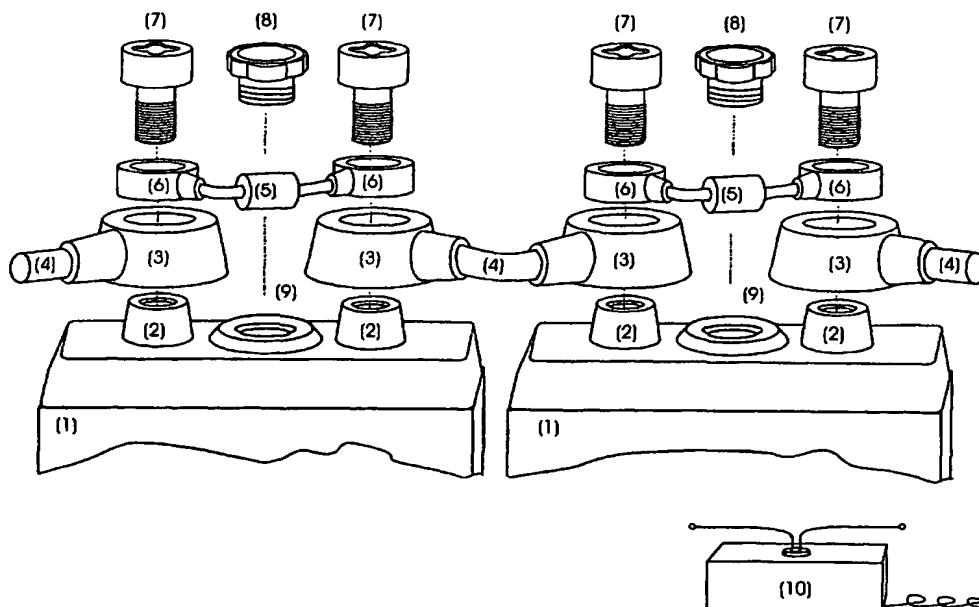
(74) Agent: **VOLMER, Georg**; Philips Intellectual Property &
Standards GmbH, Weisshausstr. 2, 52066 Aachen (DE).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR,
CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,
KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN,
MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU,
SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (BW, GH,
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: WIRELESS BATTERY MANAGEMENT SYSTEM



(57) Abstract: Measurement of physical properties and individual charge control of the cells of a battery may lead to a longer battery life and to a more reliable operation. The present invention discloses a system, a cell unit, a control unit and a method for the automated management of batteries via a wireless communication link. According to the invention, the life cycle of individual cells of a battery may be tracked and recorded by an external control unit. Advantageously, active control of the battery cells is provided, including the ability to provide a short circuit between respective poles of battery cells.

WO 2004/047215 A1



European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— *with international search report*